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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,869	09/22/2003	Ayman Esam Nassar	985279.0119	1166

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EXAMINER
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PASIA, REDENTOR M

ART UNIT	PAPER NUMBER
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2616

MAIL DATE	DELIVERY MODE
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11/08/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/667,869	Applicant(s) NASSAR, AYMAN ESAM	
	Examiner Redentor M. Pasia	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 and 13-24 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                   |                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                              | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>02/26/2004</u> | 6) <input type="checkbox"/> Other: ____                                                |

## **DETAILED ACTION**

### ***Response to Amendment***

Applicant's amendment filed on August 3, 2007 has been entered. Claims 1, 5, 7-11, 13, 15, 19-21 have been amended. Claim 12 has been canceled. Claim 24 has been added. Claims 1-11, 13-24 are still pending in this application, with claims 1, 13 and 19 being independent.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2-11 recites the limitation "packet services node" in the preamble of each claim. The examiner suggests amending the limitation to "physical packet services node" in order to have antecedent basis to the claim limitation in claim 1.

There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 6-8, 10, 11, 13-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider et al. (US 2006/0114889 A1; hereinafter Schneider) in view of Hughes et al. (US 6434612 B1; hereinafter Hughes).

As to claim 1, Schneider shows a physical packet services node (Figure 7; edge switch 12) within a telecommunications network (abstract), comprising: a logical communications node (Figure 7; edge switch) operated by a service provider (Par. 0038; service customers 10 and 18 are not limited to individuals but also enterprise networks, ISPs, and peer networks.) as in independent packet services node of the service provider (Figures 7-12) that is capable of handling service requests for customers of the service provider (Par. 0082-0084 with reference to Figure 10; shows the general procedure to enable ATM SVC services) that is capable of being dynamically configured in a customized manner by the service provider (Figure 7; Par. 0082-0084). However, Schneider does not show common resources, a portion of said

common resources being dedicated to said logical communications node and capable of being configured by the service provider.

Hughes shows the common resources, a portion of said common resources being dedicated to said logical communications node and capable of being configured by the service provider (col. 3, lines 47-55; the switch provides a number of switch partitions and comprise a number of subsets of switch resources that define a number of independent subset of networks; the connection control interface allows the independent controllers to control the connections of the switch using the number of switch resource partitions.). It would have obvious to one of ordinary skill in the art at the time of the invention to modify the edge router of Schneider to include the common resources of Hughes in order to have more flexibility and performance scalability in the network.

As to claim 2, modified Schneider shows that the portion of said common resources is capable of being dynamically and customarily reconfigured and allocated to said logical communications node (Schneider: Par. 0059; shows that network capability 60 may include an edge router 42 that accepts Resource Reservation Protocol (RSVP) signaling from the service customer 10. Figure 5, edge router 42; Par. 0060-0061 with reference to Figure 5; shows the procedure where a service customer 10 requests connection and edge router receives an RSVP path message. The edge router 42 then validates the message and initiates a network connection to the other edge of the

network connection capability. This service request connection configures the edge router to connect to the service provider.).

As to claim 3, modified Schneider shows said common resources include switch fabric (Hughes: Figure 11; ATM Switch Fabric 780).

As to claim 6, modified Schneider shows said common resources include traffic processor boards (Hughes: Figure 11; port cards 760-766).

As to claim 7, modified Schneider shows said common resources include software resources (Hughes: col. 5, lines 13-19; the VSI allows for partitioning of switch resources to allow simultaneous control of a switch by multiple independent controllers. Furthermore, this VSI provides a clean interface for setting up switch connections and virtual channels or circuits, so that portable software for network layers and above may be written independently of any particular switch.).

As to claim 8, modified Schneider shows an additional logical communications node (Hughes: Figure 11; col. 8, lines 66-67, a virtual switch interface (VSI) exists on each port card 760-766 of switch 752) operated by an additional service provider as an

independent packet services node of the additional service provider that is capable of handling service requests for customers of the additional service provider, said additional logical communications node being capable of being dynamically configured in a customized manner by the additional service provider (Hughes: col. 3, lines 47-55; the switch provides a number of switch partitions and comprise a number of subsets of switch resources that define a number of independent subset of networks; the connection control interface allows the independent controllers to control the connections of the switch using the number of switch resource partitions; col. 5, lines 1-29); and an additional portion of said common resources dedicated to said additional logical communications node and capable of being configured by the additional service provider (Hughes: col. 3, lines 47-55; col. 5, lines 1-29).

As to claim 10, modified Schneider shows said additional logical communications node is a master communications node (Hughes: col. 9, lines 24-26; a VSI-master which run on the switch) and the additional service provider is an operator of the physical packet services node (Hughes: col. 5, lines 6-8, the controllers on a number of switches belong to an arbitrary number of distinct groups, although generally not more than one controller on each switch will belong to each group; col. 3, lines 47-55; the switch provides a number of switch partitions and comprise a number of subsets of switch resources that define a number of independent subset of networks; the connection control interface allows the independent controllers to control the connections of the switch using the number of switch resource partitions), the master

communications node being configured to manage and allocate said common resources to said logical communications node (Hughes: col. 3, lines 47-55).

As to claim 11, modified Schneider shows that the network connection capability 60 can be realized by one or more IP routers (Schneider: Par. 0059).

As to claim 13, Schneider show a system (Figure 7) for sharing and optimizing resources between service providers within a telecommunications network (abstract), comprising: a first service provider (figure 7; service customer 10; Par. 0038; service customers 10 and 18 are not limited to individuals but also enterprise networks, ISPs, and peer networks.) capable of providing telecommunications services to end users (Figure 7; service customer 18); and a unified and integrated switch (Figure 7; edge switch 12) within the telecommunications network (figure 7) and having a physical interface (Figure 8, Edge Switch physical port 26) to said first service provider (Figure 7, SVC service customer 10), said unified and integrated switch (figure 8, Edge Switch 12,16) including a first logical communications node (Figure 8, Logical Port Function) operated by said first service provider (Figure 7; SVC service customer 10) as an independent packet services node of the service provider that is capable of handling service requests for customers of the service provider (Par. 0082-0084 with reference to Figure 10; shows the general procedure to enable ATM SVC services). However, Schneider does not show a first portion of common resources within said unified and



integrated switch dedicated thereto, the first portion of the common resources being configured by said first service provider.

Hughes shows a first portion of common resources within said unified and integrated switch dedicated thereto, the first portion of the common resources being configured by said first service provider (col. 3, lines 47-55; the switch provides a number of switch partitions and comprise a number of subsets of switch resources that define a number of independent subset of networks; the connection control interface allows the independent controllers to control the connections of the switch using the number of switch resource partitions.). It would have obvious to one of ordinary skill in the art at the time of the invention to modify the edge router of Schneider to include the common resources of Hughes in order to have more flexibility and performance scalability in the network.

As to claim 14, this claim is rejected using the same reasoning set forth in the rejection of claim 2.

As to claim 15, modified Schneider shows a second service provider (Hughes: col. 5, lines 6-8, the controllers on a number of switches belong to an arbitrary number of distinct groups, although generally not more than one controller on each switch will belong to each group; col. 3, lines 47-55; the switch provides a number of switch partitions and comprise a number of subsets of switch resources that define a number

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of independent subset of networks; the connection control interface allows the independent controllers to control the connections of the switch using the number of switch resource partitions), said unified and integrated switch including a second logical communications node (Hughes: Figure 11; col. 8, lines 66-67, a virtual switch interface (VSI) exists on each port card 760-766 of switch 752) associated with said second service provider (Hughes: col. 5, lines 6-8; col. 3, lines 47-55), the second logical communications node having a second portion of the common resources dedicated thereto that is configured by said second service provider (Hughes: col. 3, lines 47-55; col. 5, lines 1-29).

As to claim 16, this claim is rejected using the same reasoning set forth in the rejection of claim 10

As to claim 17, modified Schneider shows that the master communications node is connected to additional master communications nodes on respective additional unified and integrated switches on the telecommunications network (Hughes: Figure 12, and 6-11).

As to claim 18, modified Schneider a logical interface (Hughes: Figure 11; switch control card 792) between the first logical communications node and the second logical communications node (Hughes: figure 11; port card 760-766).

As to claim 19, this claim is rejected using the same reasoning set forth in the rejections of claim 1 and 13.

As to claim 20, modified Schneider shows the step of receiving a service request to establish the logical communications node associated with the service provider within the physical packet services node (Schneider: Figure 10).

As to claim 21, modified Schneider shows the step of receiving a service request to reconfigure the logical communications node associated with the service provider within the physical packet services node (Schneider: Figure 12).

As to claim 22, modified Schneider shows said allocating and said configuring are performed statically (Schneider: Figures 10-11; Par. 0082 and 0088).

As to claim 23, modified Schneider shows said allocating and configuring are performed dynamically (Schneider: Figure 12; Par. 0089).

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As to claim 24, modified Schneider shows a physical interface to the service provider (Hughes: col. 6, line 67 to col. 7 line 3; The VSI can be run over any physical interface including, but not limited to, an ATM network, the ethernet, or within a central processing unit.) that is capable of receiving commands for configuring and allocating the portion of the common resources dedicated to the service provider (Hughes: col. 3, lines 47-55).

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider et al. (US 2006/0114889 A1; hereinafter Schneider) in view of Hughes et al. (US 6434612 B1; hereinafter Hughes) in further view of Lau et al. (US 7079485 B1; hereinafter Lau).

As to claim 4, modified Schneider shows all of the elements except a line board.

Lau shows, at col. 14, lines 6-10, an electrical backplane 103a. It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the edger router of modified Schneider by adding the electrical backplane of Lau in order to properly assemble and properly mount the required components of the device.

As to claim 5, further modified Schneider shows an optical (Lau: col. 4, lines 8-11; means for converting codes between more-serialized, optical and/or electrical signal domain of the interface layer and a less-serialized electrical signal domain) and

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electrical signal processing (Lau: col. 4, lines 8-11) and handling components, and the handling components including at least one of such as transceivers (Lau: col. 9, lines 52-56, high-speed electrical or optical transceivers), electronic controllers (Hughes: Figure 11; controller 794) and a high speed optical/electrical switching element (Lau: col. 4, lines 17-18, a set of switching chips.).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider et al. (US 2006/0114889 A1; hereinafter Schneider) in view of Hughes et al. (US 6434612 B1; hereinafter Hughes) in further view of Matthews et al. (US 2007/0083528 A1; hereinafter Matthews).

As to claim 9, modified Schneider shows all of the elements except a firewall providing private and secure separation between said logical communications node and said additional logical communications node.

Matthews shows at Par. 0042, a firewall service model present in IP service processing switch 12. Matthew further shows at Par. 0046, that service providers can use switch 12's virtual routing capabilities, and its ability to turn IP services into discrete and customized objects, to segment and layer services for the first time for tens of thousands of discrete subscriber corporations. It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the edge router of modified Schneider by adding the firewall service model of Matthews in order to segment and layer services for tens of thousands of discrete subscribers (Par. 0046).

### ***Response to Arguments***

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection. The examiner bases his new grounds of rejections using these references:

Schneider et al. (US 2006/0114889 A1);

Hughes et al. (US 6434612 B1);

Lau et al. (US 7079485 B1);

Matthews et al. (US 2007/0083528 A1).

In regards to the amended claims, proper rejection was used as noted above.

Please refer to the claim rejections.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Johnson et al. (US 2003/0172170 A1), note abstract;

Terrell et al. (US 2003/0189936 A1), note abstract;

Schneider et al. (US 7,050,423 B2), note abstract;

Carolan et al. (US 6,753,887 B2), note abstract.

RSVP Protocol Overview (<http://www.isi.edu/rsvp/overview.html>, Jan. 19, 1998 per WayBack Machine results.).

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

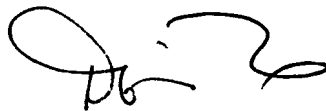
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Redentor M. Pasia whose telephone number is 571-272-9745. The examiner can normally be reached on M-F 7:30am to 4:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris H. To can be reached on (571)272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
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